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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,692	01/15/2004	Michifumi Shoda	81870.0027	4963

26021 7590 06/14/2005

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EXAMINER

CONSILVIO, MARK J

ART UNIT	PAPER NUMBER
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2872

DATE MAILED: 06/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/758,692

Applicant(s)

SHODA ET AL.

Examiner

Mark Consilvio

Art Unit

2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/04 and 6/04</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The information disclosure statements (IDS) submitted on 2/5/2004 and 6/22/2004 are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements are being considered by the examiner.

Specification

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Sabia (US Application Patent No. 2003/0206347).

With respect to claims 1, 4, and 7-10, Sabia discloses an optical isolator element (10) comprising: at least one flat Faraday rotator (16), and at least two flat polarizers (12, 14), wherein the Faraday rotator and the polarizers are bonded to each other by hydrogen-bonding forces acting between bonding surfaces thereof, and a magnetic element (18) arranged around the optical isolator element, wherein the magnetic element is tubular and the optical isolator element is arranged inside the tubular magnetic element (fig. 1A). It is noted that hydrogen bonding is a particular type of intermolecular bonding using van der Waals forces. Hence, hydrogen-bonding forces are synonymous with van der Waals forces.

With respect to claims 2, 3, 5, and 6, Sabia discloses the bonding surfaces of at least either one of the Faraday rotator and the polarizers are integrally provided with films made of a soft and inorganic material (par. 41).

With respect to claims 11 and 17, Sabia discloses a method for producing an optical isolator element (10) including at least one flat Faraday rotator (16) and at least two flat polarizers (12, 14) bonded to each other comprising the steps of: cleaning bonding surfaces of the Faraday rotator (16) and the polarizers (12, 14), activating the bonding surfaces of at least either one of the Faraday rotator and the polarizers by the adsorption of hydroxyl groups, and bring the Faraday rotator and the polarizers into contact with each other in a vacuum thereby bonding the, Faraday rotator and the polarizers by hydrogen-bonding forces acting between the hydroxyl groups on the bonding surfaces at one side and oxygen atoms in the other bonding surfaces (par. 12 and 22).

With respect to claims 12 and 18, Sabia discloses a step of smoothing the bonding surfaces of the Faraday rotator and the polarizers is performed before the step of activating the bonding surfaces of the Faraday rotator and the polarizers (par. 27).

With respect to claims 13 and 19, Sabia discloses the bonding surfaces are so smoothed that the surface coarsenesses thereof are 10 nm or below (par. 27).

With respect to claim 14, Sabia discloses a pushing force is exerted in such a direction as to bond the Faraday rotator and the polarizers when the Faraday rotator and the polarizers having the bonding surfaces thereof activated are brought into contact with each other in vacuum (par. 22).

With respect to claims 15, 16, 20, and 21, Sabia discloses a step of integrally forming films made of a soft and inorganic material on the bonding surfaces of at least either one of the Faraday rotator and the polarizers is performed before the step of activating surfaces the bonding of the Faraday rotator and the polarizers (par. 41).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Consilvio whose telephone number is (571) 272-2453. The examiner can normally be reached on Monday thru Friday, 8:30 am to 5:00 pm.

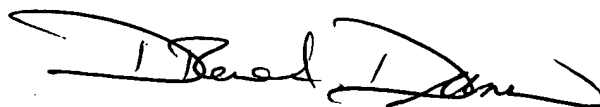
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2872

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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DREW A. DUNN
SUPERVISORY PATENT EXAMINER